

Remarks

With this response, applicants amend claims 1, 3-8, 13-17, 20, 23-24, 26-27, 29, 32, 35, 38, and 41-52, cancels no claims, and adds no new claims, such that claims 1 and 3-52 are presently pending. By this amendment, many of the claims were amended to more particularly point out and distinctly claim the subject invention and to place the claims in better form for allowance. Great care has been taken to scrupulously avoid the introduction of "new matter." Consideration and allowance of presently pending claims 1 and 3-52 is respectfully requested.

Litigation & Related Proceedings

Pursuant to 37 CFR 1.178(b), applicants submit that U.S. Patent No. 6,214,400 is not the subject of any prior or concurrent proceedings, including any reexamination or litigation.

Recapitulation of Invention

The present invention is directed to a method of heating food products using a blancher having two or more manifolds or banks of orifices that each direct fluid flow into heated heat transfer medium located in an exiting quadrant within a housing and/or tank of the blancher so as to more uniformly, more quickly, and more efficiently pasteurize or blanch the food products in the blancher by increasing turbulence in the heat transfer medium in and around food products located in the exit quadrant. By employing two or more manifolds or orifice banks that direct fluid into the exit quadrant heat transfer medium, which is where food products tend to gather and clump together, it enables greater volumes and flows of fluid to be directed along a greater portion of the exiting quadrant such that it disperses the food products more uniformly in and around the exiting quadrant. In addition, because the fluid flows and volumes are greater than in the prior art because of the increased number of manifolds or banks of orifices delivering fluid along with increased area of exiting quadrant area coverage, some of the food products get pushed out of the exiting quadrant such that the food products end up getting distributed more evenly throughout the entire blancher tank, which advantageously increases blancher capacity, speeds blanching throughput, and improves heat transfer efficiency during blancher operation.

For example, employing liquid flows discharged from orifices at a flow rate of at least 20 gallons per minute per foot is not disclosed in the prior art, including any of the cited art of record. This is because it was previously thought that the additional energy input required to

achieve such high liquid flow rates would not produce a correspondingly sufficient increase in heat transfer efficiency to justify the increased energy input such that energy ultimately would be wasted decreasing efficiency. However, the present invention utilizes such higher liquid flow rates to achieve increased heat transfer efficiencies even beyond what would have been expected simply based on the teachings of the prior art.

Response to Claim Rejections

Claims 1, 3-8, 13-17, 20, 23-24, 26-27, 29, 32, 35, 38, and 41-52 have been amended to better define applicants' invention of a method of heating food product using a blancher. In addition, claims 41-45 and 47-52 have been amended to overcome the claim rejections under 35 U.S.C. § 112. As a result, applicants respectfully submit that all of the presently pending claims are in condition for allowance and allowance of each claim is respectfully requested.

1. Rejections Under 35 U.S.C. § 102(b)

a. Claim 41 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,133,249 to Zittel et al.

Claim 41 has been amended to better define applicants' invention and not for the purpose of distinguishing over the cited art of record. For example, the word "liquid" has been added before the "heat transfer medium" limitation recited in method step c) to make claim 41 more consistent with its other claim limitations that require the flow of "liquid heat transfer medium" to be directed from the manifold orifices toward the "product receiving chamber" in the blancher housing. In addition, claim 41 has been amended to make clear that the manifolds or their orifices do not need to reside in the exiting quadrant. For example, as is shown in applicants' Figs. 2, 9 and 10, the manifolds can be located outside the blancher housing and as shown in marked up applicants' Fig. 7 presented below, the manifolds can be located inside the blancher housing in the exiting quadrant. The same is true with regard to the manifold orifices.

Claim 41 is believed to be presented in condition for allowance because the method claim 41 defines first and second lengthwise-extending manifolds located on the same side of the blancher that are each equipped with liquid heat transfer medium discharging orifices in an exiting quadrant in the blancher housing where heat transfer medium resides. As shown below in marked up applicants' Fig. 7 (Fig. 7 of U.S. Pat. No. 6,214,400), the exiting quadrant is defined as the region within the blancher extending from where the rotating food product

transport mechanism in the housing emerges from the heat transfer medium in the blancher housing to adjacent a lengthwise extending blancher housing centerline.

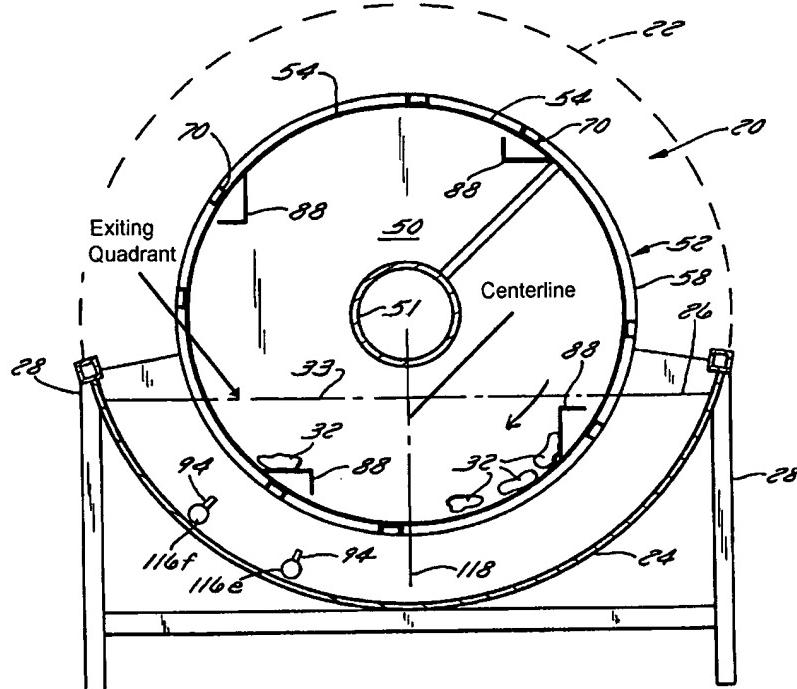


FIG. 7

The exiting quadrant, identified in the '400 patent by reference numeral 118, is also depicted in applicants' Fig. 5.

While the '249 Zittel reference discloses a blancher equipped with two manifolds 58 and 60, only a single manifold 60 has apertures 72 located in the exiting quadrant. In addition, Fig. 2 of the '249 Zittel reference discloses that each manifold 58 and 60 receives only steam or compressed air but no liquid heat transfer medium as is required of the method of the invention defined in claim 41. For at least these reasons, the '249 Zittel patent does not anticipate claim 41 under 35 U.S.C. § 102(b), necessitating the withdrawal of the rejection of claim 41.

In addition, because the '249 Zittel reference discloses only a single manifold with orifices in the blancher exiting quadrant, the ability for the steam or compressed air fluid discharged from the manifold to break up and improve heat transfer to food product in the blancher is significantly less than that of the claimed invention, which requires two manifolds each equipped with orifices in the blancher exiting quadrant because of the greater flow or

volume of fluid it discharges into the blancher housing toward food product in the rotary food product transport mechanism. By discharging liquid heat transfer medium from the orifices of the two manifolds into the blancher exiting quadrant, the greater density of liquid over that of steam or compressed air advantageously has a greater impact on food product that has gathered in the exiting quadrant due to the rotary motion of the food product transport mechanism tending to urge the food product toward that side of the blancher. The claimed method of the invention thereby breaks up any such clumps of food product more quickly and more efficiently than that of the '249 Zittel reference and also helps such clumping or food product gathering in the exiting quadrant from occurring. By doing so, it more evenly spreads the food product out in the liquid heat transfer medium throughout the entire blancher, which increases heat transfer efficiency by exposing a greater amount of surface area of each piece of food product to the liquid heat transfer medium within the blancher housing.

In addition, and not recognized in the prior art, the claimed invention enables the blancher to achieve all of these advantages plus be loaded with a greater amount of food product (increased food product depth in the blancher) during blancher operation than what was capable of being done in the past. It also advantageously enables food product processing by the blancher to be performed more quickly.

For at least these additional reasons, claim 41 is believed presented in condition for allowance and its allowance is respectfully requested.

b. Claim 42 also stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,456,091 to Zittel et al.

As with claim 41, claim 42 has been amended to better define applicants' invention and not for the purpose of distinguishing over the cited art of record. As such, even without amendment, claim 42 distinguishes over the Zittel '091 patent.

Since the Zittel '092 patent discloses a water agitation cooler it therefore fails to disclose a blancher, let alone a method of heating a food product using a blancher, as claim 42 defines. While the Zittel '092 patent discloses a manifold 23 having nozzles 62 through which water flows into a cold-water filled tank 22 at a flow rate of 50 to 150 gallons per minute from each nozzle 62, it actually amounts to no more than 8 gallons per minute per foot of blancher length as noted at column 1, lines 55-62 of applicants' Background of the Invention of U.S. Patent No. 6,214,400 because so few nozzles are used and they are spaced so far apart.

In contrast, the claimed invention defines a method of heating food product using a blancher having a manifold including discharge orifices distributed along substantially the length of the blancher with at least 20 gallons of liquid being discharged from the orifices per minute per foot of manifold length during step c). This increased total volume of flow per unit manifold length concentrates liquid flow from manifold orifices more uniformly along the length of the blancher housing thereby more uniformly breaking up and preventing food product clumping during blanching along the entire length of the blancher housing. This helps increase thermal transfer efficiency by helping ensure more of the surface area of each piece of food product is more fully immersed in the liquid heat transfer medium used to heat the food product in the food product receiving chamber. It also helps increase the amount of food product being heated in the blancher at one time by helping ensure the food products don't accumulate in the exiting quadrant, as happened in the prior art. A key advantage of the claimed method recited in claim 42 is that the increased flow rate per unit manifold length helps ensure food products don't clump together anywhere within the blancher housing along substantially its entire length.

For at least these reasons, claim 42 is also believed presented in condition for allowance and its allowance is respectfully requested.

Rejections under 35 U.S.C. § 103(a)

a. In the Office Action, claims 1, 5, 18, 21, 44-45, 48 and 51 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zittel et al., U.S. Patent No. 5,133,249 when combined with Zittel et al., U.S. Patent No. 5,456,091.

With regard to claim 1, neither Zittel reference, alone or in combination with each other as well as in combination with any other reference of record, discloses or otherwise suggests a method of heating food product using a blancher that has at least one bank of orifices spaced apart in a lengthwise direction substantially along the length of a 120° Fahrenheit liquid heat transfer medium holding blancher tank with the liquid being discharged from the orifices into the exiting quadrant of the tank also being discharged generally toward the food product transfer mechanism axis of rotation at a flow rate of at least 20 gallons per minute per foot of blancher tank length. In particular, neither Zittel reference discloses or otherwise suggests discharging liquid into the exiting quadrant from a bank of orifices at a flow rate of at least 20 gallons per minute per foot of tank length, as is recited in claim 1. For at least these reasons, claim 1 is believed presented in condition for allowance and its allowance is respectfully requested.

Similarly, with regard to claim 5, neither Zittel patent discloses a plurality of spaced apart orifice banks disposed so each directs fluid flow from each one of its orifices into liquid heat transfer medium located in an exiting quadrant of the blancher housing with the fluid being discharged from the orifices of at least one of the orifices being a liquid having a flow rate of at least 20 gallons per minute per foot of manifold length of the liquid-discharging manifold at a pressure of at least about 30 pounds per square inch. Neither Zittel reference discloses a plurality of banks of orifices that each direct fluid flow into liquid heat transfer medium in the exiting quadrant. Similarly, neither Zittel reference discloses having at least one of the manifolds discharging liquid into the exiting quadrant at a flow rate of at least 20 gallons per minute of manifold length. For at least these reasons, claim 5 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 18 is dependent upon claim 17 and is believed allowable for at least the reasons set forth below as to why claim 17 is believed presented in condition for allowance. In addition, neither Zittel reference discloses, teaches or suggests blanching at least eight inches depth of food product received in the food product-receiving chamber with the food product being blanched being relatively heavy or dense having a density of at least 55 lb/ft³. For at least these reasons, claim 18 is believed presented in condition for allowance and its allowance is respectfully requested.

Similar to claim 18, claim 21 is dependent upon claim 20 and is believed allowable for at least the reasons set forth below as to why claim 20 is believed presented in condition for allowance. In addition, neither Zittel reference discloses, teaches or suggests blanching at least eight inches depth of food product received in the food product-receiving chamber with the food product being blanched being relatively heavy or dense having a density of at least 55 lb/ft³. For at least these reasons, claim 21 is also believed presented in condition for allowance and its allowance is respectfully requested.

Claim 44, as amended, is believed presented in condition for allowance because neither Zittel reference discloses or otherwise suggest first and second lengthwise extending manifolds having orifices that each discharge fluid into the exit quadrant of the blancher. Neither Zittel reference discloses a plurality of exit quadrant orifice discharging manifolds with the orifices of one of the manifolds discharging liquid into the exiting quadrant into the perforate food product-receiving chamber. Neither Zittel reference discloses first and second manifolds that each have a

plurality of pairs of orifices with the orifices of one manifold discharging liquid into the blancher exiting quadrant and the orifices of the other manifold discharging a gaseous or vaporous, e.g., steam or blancher atmosphere, fluid into the exiting quadrant. For at least these reasons, claim 44 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 45, as amended, is believed presented in condition for allowance because neither one of the Zittel references disclose, among other things, first and second manifolds each having a plurality of pairs of orifices directing liquid into liquid heat transfer medium that is located in an exiting quadrant at a flow rate of at least 20 gallons per minute per foot. For at least these reasons, claim 45 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 48, as amended, is believed presented in condition for allowance because neither Zittel reference, alone or in combination, discloses or otherwise suggests a manifold that extends substantially the length of an aqueous heat transfer medium fluid holding tank with the manifold having a plurality of pairs of spaced apart orifices from which an aqueous fluid is discharged and directed into the exiting quadrant, let alone the aforementioned in combination with there being at least eight inches of depth of food product pieces in the perforate drum. For at least these reasons, claim 48 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 51, as amended, is also believed presented in condition for allowance. Neither Zittel reference, alone or in combination, discloses or otherwise teaches first and second manifolds having orifices directing discharged fluid into the exiting quadrant and toward the perforate food product-receiving chamber, e.g., perforate cylindrical drum, so it impinges against food product in the chamber that are located in the exiting quadrant. In addition, neither Zittel reference discloses this combination of claim elements where the method further includes providing a recirculation system that withdraws fluid from an intake that communicates with the interior of the blancher housing and delivers the withdrawn fluid to one of the exiting quadrant located manifolds. For at least these reasons, claim 51 is believed presented in condition for allowance and its allowance is respectfully requested.

b. In the Office Action, claims 8-16, 35 and 38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zittel, U.S. Patent No. 5,133,249 when combined with Zittel, U.S. Patent No. 6,263,785.

Neither Zittel reference discloses or otherwise suggest discharging a gas, such as air, into liquid heat transfer medium in the blancher housing towards the perforate food product-receiving chamber at the claimed combination of at least 60 CFM at a pressure of at least 2 psi. As is noted in applicants' Background of the Invention, while air has been injected at a pressure of as much as 150 psi, it has never been injected at a flow rate of more than 25 CFM. See column 1, lines 50-54 of applicants' U.S. Patent No. 6,214,400. This is consistent with the disclosure of the Zittel '249 patent, which is completely silent as to the CFM of the discharged air, but discloses the air being discharged at a pressure of between 10-100 psi. See column 4, lines 23-25 of the '249 patent. The Zittel '785 patent is even more deficient in this regard, as it completely fails to disclose or otherwise suggest any operating method discharge flow rates or pressures. In addition, the increase in power required to produce the claimed combination of minimum gas discharge flow rate and minimum pressure is counterintuitive to the benefit achieved practicing the method of the invention recited in claim 8 because at some point one skilled in the art expects the increased power required to achieve this minimum flow rate and pressure to result in reduced efficiency rather than increased efficiency, which advantageously is the case for the claimed invention recited in claim 8. Therefore, for at least these reasons, claim 8 is believed presented in condition for allowance and its allowance is respectfully requested.

Claims 9-12 ultimately depend from claim 8 and are believed presented in condition for allowance for at least the same reasons claim 8 is believed to be allowable. In addition, each one of claims 9-12 is believed to independently define patentable subject matter. For example, neither Zittel reference discloses the combination of discharging gas withdrawn from gaseous atmosphere in the blancher back into liquid heat transfer medium in the exiting quadrant of the blancher at a flow rate of at least 60 CFM and at a pressure of at least 2 psi as is defined in claim 9. Neither Zittel reference discloses discharging the gas into the liquid heat transfer medium in the exiting quadrant at the aforementioned minimum flow rate and pressure where the flow rate also is at least 100 CFM per foot of length. Therefore, for these additional reasons, claims 9-12 are believed presented in condition for allowance, and their allowance is respectfully requested.

Claim 13, as amended, is believed presented in condition for allowance because neither Zittel reference discloses first and second orifice banks having orifices discharging fluid into the exiting quadrant of the blancher, let alone a method where a gaseous fluid is discharged into the exiting quadrant from the orifices of one of the banks and a liquid fluid is discharged into the

existing quadrant from the orifices of the other one of the banks. For at least these reasons, claim 13 is believed presented in condition for allowance and its allowance is respectfully requested.

Claims 14-16 ultimately depend from claim 8 and are believed presented in condition for allowance for at least the same reasons claim 8 is believed to be allowable. In addition, each one of claims 14-16 is believed to independently define patentable subject matter. See also the remarks above presented in support of patentability of claims 9-12. With regard to claim 16, neither Zittel reference discloses or otherwise suggests the claimed combination of discharging gas from the orifices of one of the orifice banks at a flow rate of at least 10 CFM per foot and discharging liquid from the orifices of the other one of the orifice banks at a flow rate of at least 20 gpm per foot. For these additional reasons, claims 14-16 are believed presented in condition for allowance, and their allowance is respectfully requested.

Claim 35, as amended, is believed presented in condition for allowance because neither Zittel reference discloses or otherwise suggests orifices extending in a lengthwise direction arranged substantially the length of the blancher housing that each discharge air into liquid heat transfer medium in the blancher housing at a flow rate of 60 CFM per foot at a pressure of 2 psi where the blancher is heating food product in the liquid heat transfer medium having a density of no greater than 55 lb/ft³. Such food product tends to be more fragile than denser food product such that the method of the invention defined in claim 35 advantageously enables heating of such food product while helping keep them from conglomerating in the exiting quadrant throughout substantially the entire length of the blancher housing, increasing thermal transfer efficiency over the methods disclosed in the prior art. Therefore, for at least these reasons, claim 35 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 38, as amended, is believed presented in condition for allowance because neither Zittel reference discloses or otherwise suggests orifices extending in a lengthwise direction arranged substantially the length of the blancher housing that each discharge air into liquid heat transfer medium in the blancher housing at a flow rate of 10 SCFM per foot at a pressure of 80 psi where the blancher is heating food product in the liquid heat transfer medium having a density of no greater than 55 lb/ft³. For at least the same additional reasons claim 35 is believed presented in condition for allowance, claim 38 is also believed presented in condition for allowance and its allowance is respectfully requested.

c. In the Office Action, claims 3-4, 6-7, 17, 20, 23-24, 26-27, 29-30, 32-33, 42-43 and 46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zittel, U.S. Patent No. 5,133,249, in view of Zittel, U.S. Patent No. 5,456,091, when further combined with Zittel, U.S. Patent No. 6,263,785.

Claims 3-4 ultimately depend from claim 1, claims 6-7 ultimately depend from claim 5, and claim 46 depends from claim 45, such that each are believed presented in condition for allowance for ultimately depending from an independent claim believed presented in condition for allowance. Therefore, each of these dependent claims are believed allowable for at least the reasons presented above in support of allowance of the corresponding independent claim from which each of claims 3-4, 6-7, and 46 ultimately depends. For at least these reasons, claims 3-4, 6-7, and 46 are each believed presented in condition for allowance, and allowance of each claim is respectfully requested.

With regard to amended claim 17, none of the three cited Zittel references disclose or otherwise suggest the claimed method that includes the combination of one bank of orifices discharging water into liquid heat transfer medium in the exiting quadrant at a flow rate of at least 20 gallons per minute per foot of manifold length and another bank of orifices discharging air into liquid heat transfer medium in the exiting quadrant at a flow rate of 60 standard cubic feet per minute where the food product being heated in the blancher has a density of at least 55 lb/ft³. Therefore, for at least these reasons, claim 17 is believed presented in condition for allowance and its allowance is respectfully requested.

None of the Zittel references disclose a plurality of longitudinally extending manifolds that each have orifices discharging recirculated water from within the blancher housing, e.g., blancher tank, out its orifices into water heat transfer medium in an exiting quadrant of the blancher, let alone doing so where the discharged water reaches the water in the perforate food product-receiving chamber, e.g. perforate drum, as required by the method defined in claim 20. Therefore, for at least these reasons, claim 20 is believed presented in condition for allowance and its allowance is respectfully requested.

With regard to amended claim 23, none of the Zittel references disclose or otherwise suggest a method of heating food product having density of at least 55 lb/ft³ using a blancher having a perforate food product-receiving chamber where there are first and second manifolds each equipped with a plurality of pairs of orifices from which water at a flow rate of 20 gallons

per minute per foot of manifold length is discharged into liquid heat transfer medium in the exiting quadrant of the blancher towards the perforate food product receiving chamber. Such directed fluid flows at the claimed flow minimum flow rate prevents clumping and de-clumps relatively dense food product (having a density of at least 55 lb/ft³) thereby increasing heat transfer efficiency, enabling increased blanching capacity and enabling faster food product blanching throughput. For at least these reasons, claim 23 is believed presented in condition for allowance and its allowance is respectfully requested.

Amended claim 24 depends from claim 23 and is believed to be allowable for at least the same reasons that claim 23 is believed presented in condition for allowance.

With regard to amended claim 26, none of the cited Zittel references disclose or otherwise suggest a blancher having at least one manifold that discharges recirculated liquid heat transfer medium from the liquid heat transfer medium within the blancher housing into blanching-temperature liquid heat transfer medium in the exiting quadrant at a flow rate of 20 gallons per minute per foot of blancher housing length substantially along the entire length of the blancher housing. For at least these reasons, claim 26 is believed presented in condition for allowance and its allowance is respectfully requested.

Amended claim 27 depends from claim 26 and is believed to be allowable for at least the same reasons that claim 26 is believed presented in condition for allowance.

Amended claim 29 is believed presented in condition for allowance because none of the Zittel references disclose withdrawing pasteurizing temperature liquid heat transfer medium from within the blancher housing, e.g. from within the blancher tank, and discharging it from a plurality of pairs of orifices of an exteriorly located manifold substantially along the entire length of the blancher housing at a flow rate of at least 20 gallons per minute per foot of length in a method of heating relatively dense and hard to move food product having a density of at least 55 lb/ft³. For at least these reasons, claim 29 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 30 depends from claim 29 and is believed to be allowable for at least the same reasons that claim 30 is believed presented in condition for allowance.

It is believed that claim 32 is allowable over the three cited Zittel references because none of these references disclose or otherwise suggest discharging water from at least one orifice at a flow rate of at least 20 gallons per foot of blancher length at a pressure of at least 30 psi into

liquid heat transfer medium in the exiting quadrant of the blancher and discharging air from at least one other orifice at a flow rate of 10 standard cubic feet per minute per foot of blancher length at a pressure of at least 80 psi into liquid heat transfer medium in the exiting quadrant of the blancher. For at least these reasons, claim 32 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 33 depends from claim 32 and is believed to be allowable for at least the same reasons that claim 32 is believed presented in condition for allowance.

As amended, claim 42 is believed presented in condition for allowance for at least the reasons set forth above in support of patentability of claim 42 overcoming its rejection under 35 U.S.C. § 102(b). None of the three cited references disclose or otherwise suggest the invention defined in method claim 42. For at least these reasons, claim 42 is believed presented in condition for allowance and its allowance is respectfully requested.

As amended, claim 43 is also believed to distinguish over the cited references of record. None of the three cited Zittel references disclose or otherwise suggest the claimed method which recites a combination of a plurality of manifolds equipped with fluid discharging orifices in the exiting quadrant with the orifices of at least one of the manifolds discharging liquid heat transfer medium toward a food product-receiving perforate drum in the blancher housing at a flow rate of at least 20 gallons per minute per foot of manifold length. For at least these reasons, claim 43 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 46 depends from claim 45, which is believed allowable for at least the reasons set forth above in support of the patentability of claim 45. Claim 46 is also believed to distinguish over the three cited Zittel references because none of them disclose or otherwise suggest the combination of limitations recited in method claim 45 along with the requirement that during method step c) that gas be discharged into the exiting quadrant from the orifices of the other one of the manifolds at a flow rate of at least 10 SCFM. For at least these additional reasons, claim 46 is believed presented in condition for allowance and its allowance is respectfully requested.

d. In the Office Action, claims 22, 37, 47, 49-50 and 52 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zittel, U.S. Patent No. 5,133,249, in view of Zittel, U.S. Patent No. 5,456,091, when further combined with Zittel, U.S. Patent No. 6,105,485.

Claim 22 depends from independent claim 20 and claim 37 depends from independent claim 35 such that each of these dependent claims is believed allowable for at least the same

reasons as the independent claim from which each ultimately depends. For at least this reason, claims 22 and 37 are believed presented in condition for allowance and allowance of each is respectfully requested.

Claim 47 is believed presented in condition for allowance because none of the three cited Zittel references disclose or otherwise suggest a blancher for heating food product in a liquid heat transfer medium having a manifold with orifices directing liquid into the liquid heat transfer medium in the exiting quadrant in the tank at a flow rate of 20 gallons per minute per foot from each one of the orifices enabling at least 4500 pounds of food product to be processed and removed from the blancher per hour. None of the Zittel references discloses or otherwise suggests, among other things, a method of heating a food product using a blancher employing such a high per-orifice discharge flow rate. For at least these reasons, claim 47 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 49 is also believed presented in condition for allowance because none of the three cited Zittel references disclose or otherwise suggest a blancher for heating food product in a liquid heat transfer medium having a manifold with orifices directing liquid into the liquid heat transfer medium in the exiting quadrant in the tank at a flow rate of 20 gallons per minute per foot from each one of the orifices enabling at least 8000 pounds of food product to be processed and removed from the blancher per hour. None of the Zittel references discloses or otherwise suggests, among other things, a method of heating a food product using a blancher employing such a high per-orifice discharge flow rate. For at least these reasons, claim 47 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 50, as amended, is also believed to be allowable over the three cited Zittel references as none of the references disclose or otherwise suggest a plurality of manifolds with one of the manifolds discharging liquid from its orifices into the exiting quadrant at a flow rate of 20 gallons per minute per foot of length of manifold to achieve processing production throughput of at least 8,000 pounds of relatively high density food product (at least 55 lb/ft³) per hour. As previously discussed, none of the references disclose or otherwise suggest first and second manifolds that each have orifices that discharge fluid into the exiting quadrant. For at least these reasons, claim 50 is believed presented in condition for allowance and its allowance is respectfully requested.

Claim 52, as amended, is also believed to be allowable over the three cited Zittel references as none of the references disclose or otherwise suggest a plurality of manifolds with one of the manifolds discharging liquid from its orifices into the exiting quadrant at a flow rate of 20 gallons per minute per foot of length of manifold to achieve processing production throughput of at least 8,000 pounds of food product per hour with at least 8 inches of food product depth being heated during step d). Also, as previously discussed, none of the references disclose or otherwise suggest first and second manifolds that each have orifices that discharge fluid into the exiting quadrant. For at least these reasons, claim 52 is believed presented in condition for allowance and its allowance is respectfully requested.

e. In the Office Action, claims 19, 25, 28, 31 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zittel, U.S. Patent No. 5,133,249, in view of Zittel, U.S. Patent No. 5,456,091, and Zittel, U.S. Patent No. 6,263,785, when further combined with Zittel, U.S. Patent No. 6,105,485.

Claim 19 depends from claim 17, claim 25 depends from claim 23, claim 28 depends from claim 26, claim 31 depends from claim 29, and claim 34 depends from claim 32, such that each claim is believed presented in condition for allowance for depending upon an independent claim that is believed presented in condition for allowance at least for the reasons set forth above. In addition, each of these claims is believed to independently define patentable subject matter. For at least these reasons, claims 19, 25, 28, 31 and 34 are each believed presented in condition for allowance, and allowance of each claim is respectfully requested.

f. In the Office Action, claim 40 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zittel, U.S. Patent No. 5,133,249, in view of Zittel, U.S. Patent No. 6,263,785, when further combined with Zittel, U.S. Patent No. 6,105,485.

Claim 40 depends from claim 38 and is believed to be allowable for at least the same reasons that claim 38 is believed presented in condition for allowance. For at least this reason, claim 40 is believed presented in condition for allowance and its allowance is respectfully requested.

g. In the Office Action, claims 36 and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zittel, U.S. Patent No. 5,133,249, in view of Zittel, U.S. Patent No. 6,263,785, when further combined with Zittel, U.S. Patent No. 5,456,091.

Claim 36 depends from independent claim 35 and is believed to be allowable for at least the same reasons that claim 35 is believed presented in condition for allowance. Claim 39 depends from independent claim 38 and is believed to be allowable for at least the same reasons that claim 38 is believed presented in condition for allowance. For at least these reasons, claim 36 and 39 are each believed presented in condition for allowance and allowance of each claim is respectfully requested.

Deficiency of the Declaration

In the first paragraph on page 2 of the Office Action, the Patent Office claims that the “reissue oath/declaration filed with this application is defective because it fails to identify at least one specific error which is relied upon to support the reissue.” Applicants respectfully submit that the Reissue Declaration by the Assignee signed by the assignee’s Chief Operating Officer, Steven Hughes, on February 20, 2004, identifies “at least one specific error” beyond that which is identified by the checkbox “by reason of the patentee claiming more or less than he had a right to claim in the patent” as checked on its first page. More specifically, as is stated at the top of the second page of the Declaration:

At least one error upon which reissue is based is described as follows:

It is believed that the scope of the broadest **independent claim** is too broad in view of the prior art, it is believed that certain further features could have been and should have been claimed in both independent form and dependent form to better clarify the scope of the invention and further distinguish the invention from the prior art.

(emphasis added). Applicants therefore believe that “the at least one error” in the as-issued U.S. Patent No. 6,214,400, is evident from statements made above in the as-filed Declaration, statements made in the as-filed preliminary amendment along with claim amendments presented in the preliminary amendment. This includes, in particular, the proposed corrections to the wording of the sole independent claim of the ‘400 patent, claim 1, that had been amended in the preliminary amendment.

Should a new declaration still be required, the Examiner is requested to contact the undersigned and the patentee will submit a new declaration.

Conclusion and Petition for Two Month Extension of Time

The Commissioner is authorized to charge the amount of \$225 to cover the cost of a two month extension of time from April 18, 2006 to June 19, 2006 (June 18, 2006 falls on a Saturday), all for a small entity. No other fees are believed to be payable with this communication. However, the Commissioner is authorized to charge any fees or credit any overpayment to Deposit Account No. 50-1170.

Applicant believes the application is now in condition for allowance and such action is earnestly requested. If the Examiner believes that a telephone interview with applicant's attorney would facilitate the prosecution and allowance of the application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Gayle A. Bush
Reg. No. 52,677

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